Data Evaluation Record on the aerobic biotransformation of fenpyroximate in water-sediment system

PMRA Submission Number {.....} EPA MRID Number 47521406

Data Requirement:	PMRA Data Code:	
	EPA DP Barcode:	356210
	OECD Data Point:	
	EPA Guideline:	835.4300

Test material:

Common name:	Fenpyroximate.
Chemical name:	
IUPAC name:	tert-Butyl (E)-α-(1,3-dimethyl-5-phenoxypyrazol-4-ylmethyleneamino-oxy)-p-toluate.
CAS name:	1,1-Dimethylethyl 4-[[[(E)-[(1,3-dimethyl-5-phenoxy-1H-pyrazol-4-yl)methylene]amino]oxy]methyl]benzoate.
CAS No:	134098-61-6.
Synonyms:	NNI-850, FENPYROXIMATE.
SMILES string:	Cc1nn(c(c1C=NOCc1ccc(cc1)C(=O)OC(C)(C)C)Oc1ccccc1)C.

Primary Reviewer: Lynne Binari
Cambridge Environmental
Signature:
Date: 11/20/08

Secondary Reviewer: Kathleen Ferguson
Cambridge Environmental
Signature:
Date: 11/20/08

QC/QA Manager: Joan Gaidos
Cambridge Environmental
Signature:
Date: 11/20/08

Final Reviewer: Greg Orrick
EPA Reviewer
Signature: Greg Orrick
Date: 1/20/12

Company Code:
Active Code:
Use Site Category:
EPA PC Code: 129131.

CITATION: Völkl, S. 2001. ^{14}CFenpyroximate (NNI-850) [pyrazole-labelled] degradation and metabolism in aquatic systems: amendment 1. Amendment prepared by RCC Ltd., Itingen, Switzerland; sponsored by Nihon Nohyaku Co. Ltd., Tokyo, Japan; and submitted by Nichino America, Inc. (location not reported). Project ID No.: E-4027 Supp. 1, 7L365. RCC Project No.: 346230. Experimental start and completion dates not applicable. Amendment to final report issued May 10, 2001.

SUPPLEMENTARY DER: Supplemental information (MRID 47521406) was submitted regarding a previously reviewed fenpyroximate aerobic aquatic metabolism study (MRID 45734202). This submission addresses identification of four previously unidentified transformation products of fenpyroximate, RW7, RS4, PW5 and PS4, all of which were identified as M-3.

No additional experiments or analyses were performed for MRID 47521406. TLC chromatograms from the original study were resubmitted designating co-chromatography of reference standard M-3 with extracted components RW7, PW5 and RS4 (Appendix II, p. 47; Figures 14-15, pp. 66-67; Figure 18, p. 68; Figure 23, p. 69 of MRID 47521406); confirmation of co-chromatography of extracted PS4 with M-3 reference standard was not provided. No explanation was provided as to why identification of RW7/RS4 and PW5/PS4 as M-3 was not included in the original study report. The original study report containing all amended pages was appended (E-4027) as part of MRID 47521406.

EXECUTIVE SUMMARY (Updated for MRIDs 45734202 and 47521406)

The biotransformation of [pyrazole-3-^{14}C]-labeled fenpyroximate, at 0.050 mg a.i./L, was studied in river water-sandy loam sediment and pond water-silt loam sediment systems from Switzerland for 105 days under aerobic conditions in darkness at 20 ± 2°C. Sediment and water were equilibrated for 22 days, then, following treatment, duplicate test systems were taken after 0, 0.25, 1, 2, 7, 14, 30, 61 and 105 days of incubation. Sterile control systems were also prepared and taken for analysis after 2, 61 and 105 days. Water layer and sediment extracts were analyzed by LSC and TLC (one- and two-dimensional, normal- and reverse-phase). Twenty-two reference standards, in addition to parent fenpyroximate, were available for identification purposes.

For both systems following treatment, redox potentials in water layers and sediments were +128 to +239 mV and -309 to -100 mV, respectively. Dissolved oxygen and pH in the water layers were 2.1-6.7 mg/L and 7.59-8.48, respectively, for the sandy loam systems, and 4.3-7.8 mg/L and 7.86-8.57, respectively, for the silt loam systems.

Overall recovery of radiolabeled material averaged 101.3 ± 3.7% (range 93.8-108.9%) and 99.8 ± 2.8% (range 92.7-103.9%) of the applied for the river water-sandy loam and pond water-silt loam systems, respectively. Sediment:water ratios were approximately 1:1 immediately posttreatment, 1:6 at 7 days and 1:3 at 105 days for the river water-sandy loam systems, and approximately 1:1 immediately posttreatment, 1:3 at 7 days and 1:4 at 105 days for the pond water-silt loam systems.

In river water-sandy loam systems, fenpyroximate in the total system averaged 98.0-102.0% of the applied at 0-2 days posttreatment, decreasing to 51.0% at 30 days, 29.6% at 61 days and was 21.8% at 105 days. Fenpyroximate was primarily associated with the sediment by 7 days and not detected in the water layer after 14 days. **Three** major transformation products were identified by co-chromatography against reference standards: **M-3 (RW7/RS4; (E)-4-[(1,3-dimethyl-5-phenoxypyrazol-4-yl)-methylene-aminooxymethyl] benzoic acid**, M-11 (RW1/RS1; 1,3-dimethyl-5-phenoxypyrazole-4-carbonitrile), and M-8 (RW6/RS2; 1,3-dimethyl-5-phenoxypyrazole-4-carboxylic acid). **M-3 was detected at a maximum average 13.2% of the applied in the water only at 14 days, then was 7.1-8.7% in the total system (3.9-6.0% in water, 2.7-3.3% in sediment) at 30-61 days and 2.4% (1.6% in water, ≤1.6% in sediment) at 105 days.** M-11 averaged

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Test material:

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Chemical name:	
IUPAC name:	tert-Butyl (E)-α-(1,3-dimethyl-5-phenoxypyrazol-4-ylmethyleneamino-oxy)-p-toluate.
CAS name:	1,1-Dimethylethyl 4-[[[(E)-[(1,3-dimethyl-5-phenoxy-1H-pyrazol-4-yl)methylene]amino]oxy]methyl]benzoate.
CAS No:	134098-61-6.
Synonyms:	NNI-850, FENPYROXIMATE.
SMILES string:	Cc1nn(c(c1C=NOCc1ccc(cc1)C(=O)OC(C)(C)C)Oc1ccccc1)C (ISIS v2.3/Universal SMILES). c1cc(C(=O)OC(C)(C)C)ccc1CON=Cc2c(Oc3ccccc3)n(C)nc2C (EPI Suite, v3.12).

Primary Reviewer: Lynne Binari
Cambridge Environmental
Signature: Lynne Binari
Date: 11/20/08

Secondary Reviewer: Kathleen Ferguson
Cambridge Environmental
Signature: Kathleen Ferguson
Date: 11/20/08

QC/QA Manager: Joan Gaidos
Cambridge Environmental
Signature:
Date: 11/20/08

Final Reviewer: William Shaughnessy
EPA Reviewer
Signature:
Date: 12/5/08

Company Code:
Active Code:
Use Site Category:
EPA PC Code: 129131.

CITATION: Völkl, S. 2001. ^{14}CFenpyroximate (NNI-850) [pyrazole-labelled] degradation and metabolism in aquatic systems: amendment 1. Amendment prepared by RCC Ltd., Itingen, Switzerland; sponsored by Nihon Nohyaku Co. Ltd., Tokyo, Japan; and submitted by Nichino America, Inc. (location not reported). Project ID No.: E-4027 Supp. 1, 7L365. RCC Project No.:

maximums of 22.4-24.9% in the total system (8.0-8.8% in water, 13.6-16.8% in sediment) at 61-105 days. M-8 averaged maximums of 18.1-18.8% in the total system (15.6-16.7% in water, 1.5-2.6% in sediment) at 30-105 days. Eight minor products were detected in the water layer and **three in the sediment**, which were not identified. No correlations were made between unidentified products in the water layer and sediment, consequently, it could not be determined if eleven distinct minor products were detected, or if the same minor products were present in both media. In the water, no single unidentified product averaged >0.6% of applied. In the sediment, RS5 averaged a maximum 6.9% at study termination, while the other two minor products were each ≤1.6%. Extractable [^{14}C]residues in the sediment increased from an average 42.7% of the applied at day 0 to a maximum 87.5% at 7 days and were 46.9% at 105 days. Nonextractable [^{14}C]residues were a maximum average 22.7% of the applied at study termination. At 105 days posttreatment, $^{14}CO_2$ totaled an average 1.9% of the applied, while volatile organics were ≤0.2% (n = 1) at all intervals.

In pond water-silt loam systems, fenpyroximate in the total system averaged 93.4-99.1% of the applied at 0-2 days posttreatment, decreasing to 66.0% at 14 days, 37.8% at 30 days and was 15.8% at 105 days. Fenpyroximate was primarily associated with the sediment by 7 days and was <0.1% in the water layer at 30 days, then not detected thereafter. **Four** major transformation products were detected: **M-3** (PW5/PS4), M-11 (PW1/PS1), M-8 (PW3/PS3) and unidentified PS6. **M-3 was detected at maximum averages of 23.7-25.3% of the applied in the total system (14.6-20.8% in water, 4.5-9.1% in sediment) at 14-30 days, decreasing to 2.2-3.9% (0.3-0.6% in water, 1.9-3.4% in sediment) at 61-105 days.** M-11 averaged a maximum of 30.4% in the total system (6.1% in water, 24.3% in sediment) at 105 days. M-8 averaged a maximum of 30.2% in the total system (27.8% in water, <4.8% in sediment) at 61 days. Unidentified PS6 was detected in the sediment at a maximum (n = 1) 16.5% at 30 days, decreasing to 3.7-6.2% at 61-105 days. Four minor products were detected in the water layer and five in the sediment, which were not identified. No single unidentified minor product averaged >1.4% of applied in the water layer or >1.1% in the sediment. Extractable [^{14}C]residues in the sediment increased from an average 39.7% of the applied at day 0 to a maximum 69.0% at 7 days and were 44.0-51.2% at 61-105 days. Nonextractable [^{14}C]residues were a maximum average 28.2% of the applied at study termination. At 105 days posttreatment, $^{14}CO_2$ totaled an average 0.9% of the applied, while volatile organics were <0.1% at all intervals.

The transformation pathway proposed by the study author was not amended to include all identified transformation products. Hydrolytic cleavage of fenpyroximate at the tert-butyl group yields M-3 (E)-4-[(1,3-dimethyl-5-phenoxypyrazol-4-yl)-methylene-aminooxymethyl] benzoic acid, with cleavage at the amide bridge yielding M-11 (1,3-dimethyl-5-phenoxypyrazole-4-carbonitrile), followed by deamination and oxidation to yield M-8 (1,3-dimethyl-5-phenoxypyrazole-4-carboxylic acid). Additionally there was formation of numerous minor products and moderate levels of unextracted residues (approximately 23-28% at 105 days), but minimal mineralization to CO_2 (<2.0%).

In "sterile" systems, which contained reduced populations of microorganisms, fenpyroximate decreased from 99.8-101.7% of the applied at 2 days posttreatment to 91.2% in the river water-sandy loam systems and 70.3% in the pond water-silt loam systems at 105 days. In river water-sandy loam systems, M-11 was detected at a maximum (n = 1) 8.9% of the applied in the total system (4.1% in water, 4.8% in sediment), with M-8 and **M-3** detected at maximums of 1.6% and 1.0%, respectively. In pond water-silt loam systems, M-11 was detected at a maximum 12.4% in the total system (4.2%

in water, 8.2% in sediment), M-8 at 10.2% (8.3% in water, 1.9% in sediment) and **M-3** at 5.9% (2.9% in water, 3.0% in sediment). Extractable [^{14}C]residues were maximums of 89.3% and 82.3% of the applied for the sandy loam and silt loam sediments, respectively, while nonextractable [^{14}C]residues were a maximum 1.9% for both sediments. $^{14}CO_2$ and volatile organics were ≤0.1% at study termination.

Results Synopsis:

Test system used: River water-sandy loam sediment from Switzerland.
Linear half-life in water (0-7 days): 2.6 days (r^2 = 0.93, F = 102, p = 7.8e-6).
Linear half-life in sediment (7-61 days): 38.1 days (r^2 = 0.89, F = 50, p = 4e-4).
Linear half-life in the total system (2-61 days): 33.3 days (r^2 = 0.91, F = 83, p = 1.7e-5).

Non-linear half-life in total system (0-61 days): 28.4 days (r^2 = 0.91, F = 86, p<1e-4).

Major transformation products:
- M-3 (RW7/RS4; (E)-4-[(1,3-dimethyl-5-phenoxypyrazol-4-yl)-methylene-aminooxymethyl] benzoic acid).
- M-11 (RW1/RS1; 1,3-dimethyl-5-phenoxypyrazole-4-carbonitrile).
- M-8 (RW6/RS2; 1,3-dimethyl-5-phenoxypyrazole-4-carboxylic acid).

Minor transformation products:
- CO_2 (maximum 2.1% of applied).

Test system used: Pond water-silt loam sediment from Switzerland.
Linear half-life in water (2-14 days): 2.8 days (r^2 = 0.99, F = 372, p = 4.3e-5).
Linear half-life in sediment (7-61 days): 20.8 days (r^2 = 0.93, F = 86, p = 9e-5).
Linear half-life in the total system (0-61 days): 19.9 days (r^2 = 0.97, F = 420, p = 7.6e-12).

Non-linear half-life in total system (0-105 days): 23.4 days (r^2 = 0.96, F = 403, p<1e-4).

Major transformation products:
- M-3 (PW5/PS4; (E)-4-[(1,3-dimethyl-5-phenoxypyrazol-4-yl)-methylene-aminooxymethyl] benzoic acid).
- M-11 (PW1/PS1; 1,3-dimethyl-5-phenoxypyrazole-4-carbonitrile).
- M-8 (PW3/PS3; 1,3-dimethyl-5-phenoxypyrazole-4-carboxylic acid).
- PS6 (unidentified).

Minor transformation products:
- CO_2 (maximum 1.0% of applied).

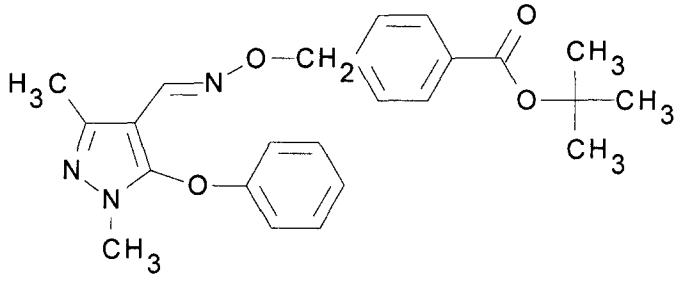
Study Acceptability: This study is classified as **supplemental** because a major transformation product (PS6) was not identified. Other study deficiencies include that only one ring structure was radiolabeled and that the sediment extraction solvents included only methanol and water while unextracted residues increased up to 28% of the applied. The original DER for MRID 45734202 contains additional discussion of anaerobicity in the sediment (not including that measured redox potentials do not appear to have been corrected to standard values), uncertainty with the TLC methods used to identify residues, and lack of sterility in the "sterile" controls.

Attachment 1: Structure of Test Material

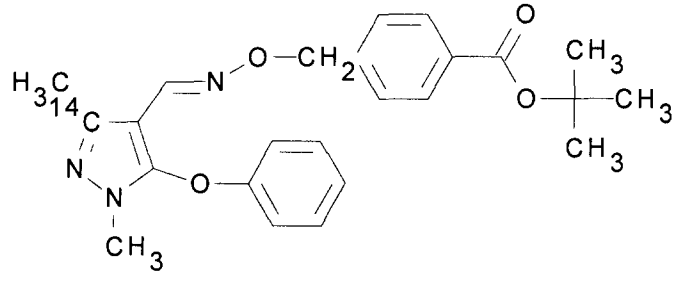
Fenpyroximate [NNI-850, FENPYROXIMATE]

IUPAC Name:	tert-Butyl (E)-α-(1,3-dimethyl-5-phenoxypyrazol-4-ylmethyleneamino-oxy)-p-toluate.
CAS Name:	1,1-Dimethylethyl 4-[[[(*E*)-[(1,3-dimethyl-5-phenoxy-1*H*-pyrazol-4-yl)methylene]amino]oxy]methyl]benzoate.
CAS No.:	134098-61-6.
SMILES String:	Cc1nn(c(c1C=NOCc1ccc(cc1)C(=O)OC(C)(C)C)Oc1ccccc1)C.

Unlabeled



[Pyrazole-3-^{14}C]fenpyroximate

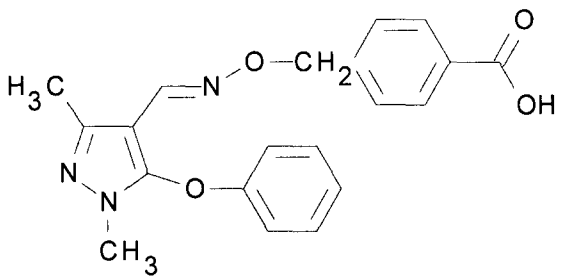


^{14}C = position of radiolabel.

Other Identified Compounds

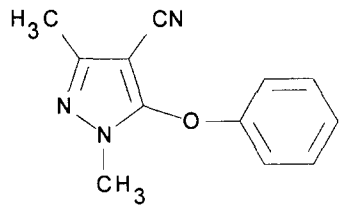
M-3 [M3, RW7/RS4, PW5/PS4]

IUPAC Name: (E)-4-((1,3-Dimethyl-5-phenoxypyrazol-4-yl)-methyleneaminooxymethyl) benzoic acid.



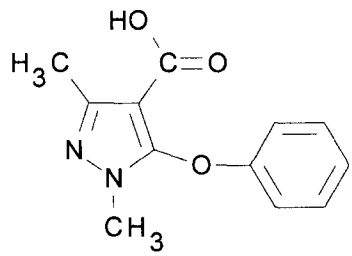
M-11 [M11, RW1/RS1, PW1/PS1]

IUPAC Name: 1,3-Dimethyl-5-phenoxypyrazole-4-carbonitrile.
SMILES String: C2(C#N)C(C)=NN(C)C=2OC1C=CC=CC=1.
Empirical formula: $C_{12}H_{11}N_3O$ **Molecular formula:** $C_{12}H_{11}N_3O$



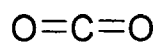
M-8 [M8, RW6/RS2, PW3/PS3]

IUPAC Name: 1,3-Dimethyl-5-phenoxypyrazol-4-carboxylic acid.
SMILES String: C2(C(O)=O)C(C)=NN(C)C=2OC1C=CC=CC=1.
Empirical formula: $C_{12}H_{12}N_2O_3$ **Molecular formula:** $C_{12}H_{12}N_2O_3$



Carbon Dioxide

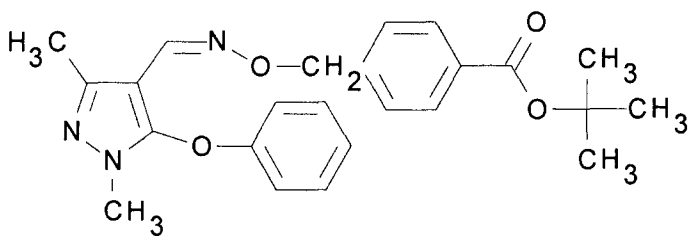
IUPAC Name: Carbon dioxide.
CAS Number: 124-38-9.



Unidentified Reference Compounds

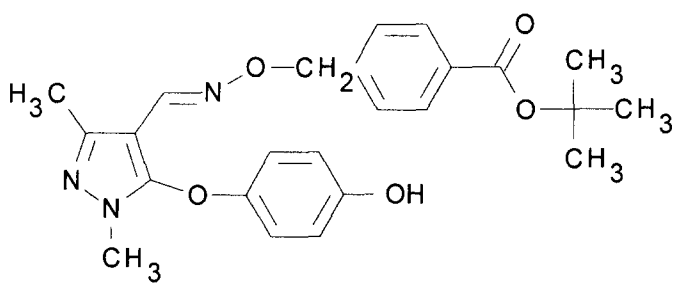
M-1

IUPAC Name: tert-Butyl (Z)-α-(1,3-dimethyl-5-phenoxypyrazol-4-ylmethyleneamino-oxy)-p-toluate.



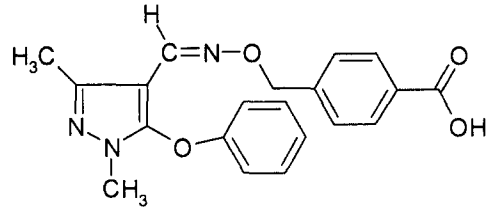
M-2

IUPAC Name: tert-Butyl (E)-α-[1,3-dimethyl-5-(4-hydroxyphenoxy)pyrazol-4-yl]methyleneamino-oxy)-p-toluate.



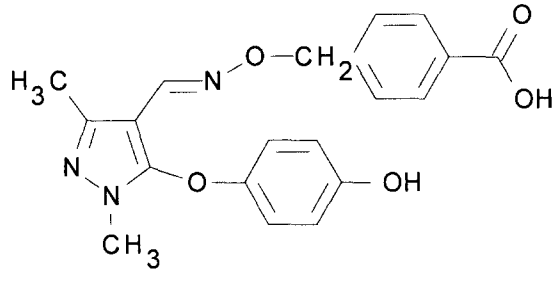
M-4

IUPAC Name: (Z)-4-[(1,3-dimethyl-5-phenoxypyrazol-4-yl)-methylene-aminooxymethyl] benzoic acid.



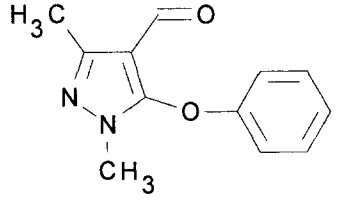
M-5

IUPAC Name: (E)-4-((1,3-Dimethyl-5-(4-hydroxyphenoxy)pyrazol-4-yl)-methyleneamino-oxymethyl)benzoic acid.



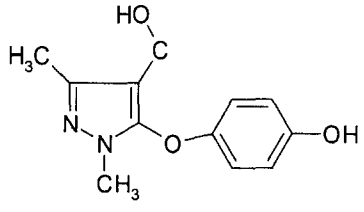
M-6

IUPAC Name: 1,3-Dimethyl-5-phenoxypyrazole-4-carbaldehyde.



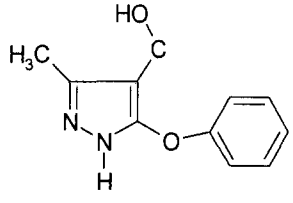
M-7

IUPAC Name: 1,3-Dimethyl-5-(4-hydroxyphenoxy)-pyrazole-4-yl)-carbaldehyde.



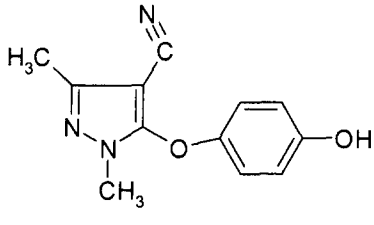
M-9

IUPAC Name: 3-Methyl-5-phenoxypyrazole-4-carbaldehyde.



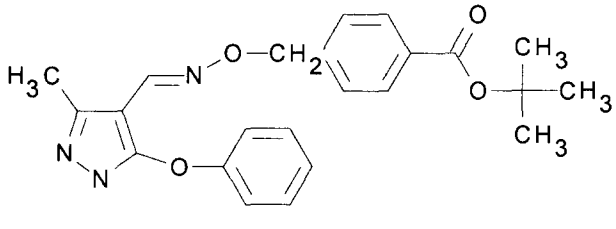
M-10

IUPAC Name: 1,3-Dimethyl-5-(4-hydroxyphenoxy)-pyrazole-4-carbonitrile.



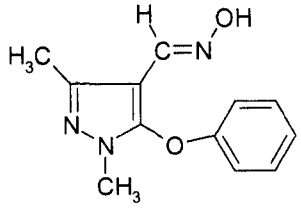
M-12

IUPAC Name: tert-Butyl (E)-α-(3-methyl-5-phenoxypyrazol-4-ylmethyleneamino-oxy)-p-toluate.



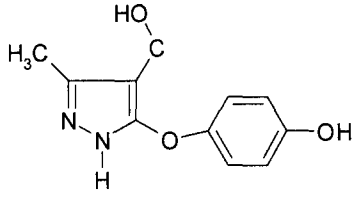
M-13

IUPAC Name: (E)-1,3-dimethyl-5-phenoxypyrazol-4-carbaldehyde oxime.



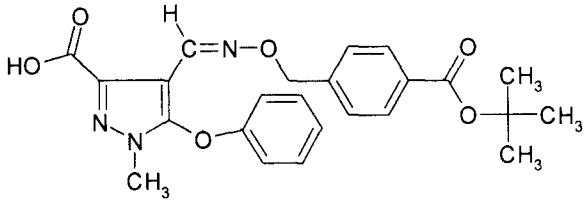
M-14

IUPAC Name: 3-Methyl-5-(4-hydroxyphenoxy)-pyrazole-4-carbaldehyde.



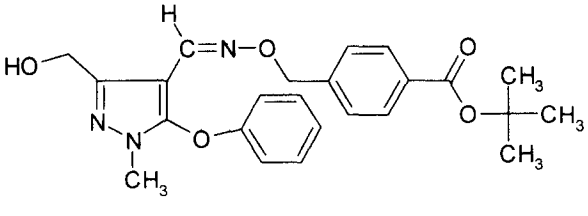
M-19

IUPAC Name: (E)-4-[(4-tert-butoxycarbonylphenyl)methyloxy-iminomethyl]-1-methyl-5-phenoxypyrazole-3-carboxylic acid.



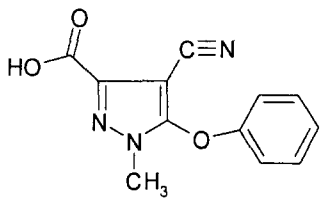
M-20

IUPAC Name: Tert-butyl(E)-4-[(3-hydroxymethyl-1-methyl-5-phenoxy-pyrazol-4-yl)-methyleneaminooxymethyl] benzoate.



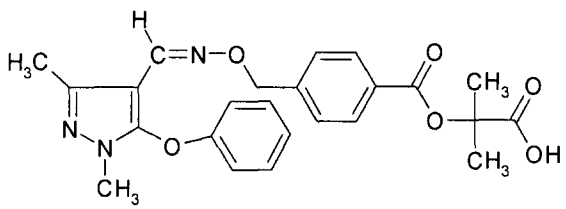
M-21

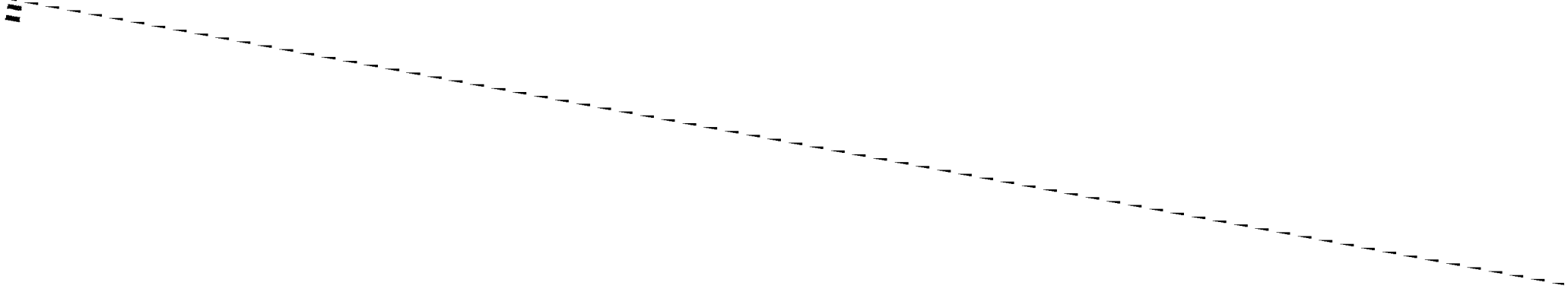
IUPAC Name: 4-Cyano-1-methyl-5-phenoxypyrazole-3-carboxylic acid.



M-22

IUPAC Name: (E)-2-[4-[(1,3-dimethyl-5-phenoxypyrazol-4-yl)methyleneaminooxymethyl] benzoyloxy]-2-methylpropanoic acid.





Attachment 2: Excel Spreadsheets

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label: Pyrazole

River water Table 10, p. 66

		Soil					Volatiles									
Day	Water	Ave	St.dev	Soil-ext	Soil bound	Total	Ave	St.dev.	KOH	Foam Plug	Total	Ave.	St.Dev	Total Rec	Ave	St.dev.
0	54.4	55.4	1.4	42.9	0.7	43.6	43.5	0.1	nd	nd				98	98.9	1.3
0	56.4			42.5	0.9	43.4			nd	nd				99.8		
0.25	51.4	56.2	6.7	41.1	1.3	42.4	43.2	1.1	<0.1	<0.1	<0.1	<0.1		93.8	99.3	7.8
0.25	60.9			42.7	1.2	43.9			<0.1	<0.1	<0.1			104.8		
1	49.0	49.9	1.3	51.3	1.8	53.1	51.8	1.9	<0.1	<0.1	<0.1	<0.1		102.1	101.7	0.6
1	50.8			48.2	2.2	50.4			<0.1	<0.1	<0.1			101.2		
2	49.1	55.9	9.5	54.5	2.7	57.2	50.5	9.5	<0.1	<0.1	<0.1	<0.1		106.3	106.3	0.0
2	62.6			42.0	1.7	43.7			<0.1	<0.1	<0.1			106.3		
7	16.9	15.0	2.7	85.6	6.4	92.0	93.3	1.8	<0.1	<0.1	<0.1	<0.1		108.9	108.3	0.9
7	13.1			89.3	5.2	94.5			<0.1	<0.1	<0.1			107.6		
14	28.9	30.9	2.8	63.7	4.0	67.7	67.1	0.8	<0.1	<0.1	<0.1	<0.1		96.6	98.0	1.9
14	32.8			62.2	4.3	66.5			<0.1	<0.1	<0.1			99.3		
30	27.1	28.0	1.2	67.3	8.5	75.8	74.4	2.1	<0.1	0.1	0.1	0.1	0.0	103.0	102.4	0.8
30	28.8			65.1	7.8	72.9			0.1	<0.1	0.1			101.8		
61	28.1	29.0	1.2	54.0	15.6	69.6	69.4	0.3	0.2	0.6	0.8	0.6	0.3	98.5	99.0	0.6
61	29.8			56.6	12.6	69.2			<0.1	0.4	0.4			99.4		
105	27.4	26.3	1.6	46.5	21.7	68.2	69.6	1.9	<0.1	1.8	1.8	2.0	0.2	97.4	97.8	0.6
105	25.2			47.2	23.7	70.9			<0.1	2.1	2.1			98.2		

	Extractable			Non-extr.		
Day		Ave.	St.Dev.		Ave.	St. Dev.
0	42.9	42.7	0.3	0.7	0.8	0.1
0	42.5			0.9		
0.25	41.1	41.9	1.1	1.3	1.3	0.1
0.25	42.7			1.2		
1	51.3	49.8	2.2	1.8	2.0	0.3
1	48.2			2.2		
2	54.5	48.3	8.8	2.7	2.2	0.7
2	42.0			1.7		
7	85.6	87.5	2.6	6.4	5.8	0.8
7	89.3			5.2		
14	63.7	63.0	1.1	4.0	4.2	0.2
14	62.2			4.3		
30	67.3	66.2	1.6	8.5	8.2	0.5
30	65.1			7.8		
61	54.0	55.3	1.8	15.6	14.1	2.1
61	56.6			12.6		
105	46.5	46.9	0.5	21.7	22.7	1.4
105	47.2			23.7		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label: Pyrazole

Pond water Table 14, p. 70

				Soil					Volatiles							
Day	Water	Ave	St.dev	Soil-ext	Soil bound	Total	Ave	St.dev.	KOH	Foam Plug	Total	Ave.	St.Dev	Total Rec	Ave	St.dev.
0	64.2	59.5	6.7	33.7	1.3	35.0	40.9	8.3	nd	nd				99.2	100.4	1.6
0	54.7			45.6	1.2	46.8			nd	nd				101.5		
0.25	50.3	51.6	1.8	41.1	1.3	42.4	44.6	3.0	<0.1	<0.1	<0.1	<0.1		92.7	96.2	4.9
0.25	52.9			44.4	2.3	46.7			<0.1	<0.1	<0.1			99.6		
1	54.4	52.0	3.4	36.9	2.1	39.0	45.1	8.6	<0.1	<0.1	<0.1	<0.1		93.4	97.1	5.2
1	49.6			48.7	2.4	51.1			<0.1	<0.1	<0.1			100.7		
2	70.6	65.9	6.6	28.1	1.7	29.8	35.8	8.4	<0.1	<0.1	<0.1	<0.1		100.4	101.7	1.8
2	61.2			39.5	2.2	41.7			<0.1	<0.1	<0.1			102.9		
7	28.8	26.8	2.8	65.0	6.6	71.6	75.4	5.4	<0.1	<0.1	<0.1	<0.1		100.4	102.2	2.5
7	24.8			73.0	6.2	79.2			<0.1	<0.1	<0.1			104.0		
14	26.9	26.3	0.9	68.3	6.3	74.6	75.2	0.8	<0.1	<0.1	<0.1	<0.1		101.5	101.4	0.1
14	25.6			69.3	6.4	75.7			<0.1	<0.1	<0.1			101.3		
30	30.3	28.8	2.1	60.5	8.5	69.0	71.4	3.3	<0.1	<0.1	<0.1	<0.1		99.3	100.2	1.2
30	27.3			67.7	6.0	73.7			<0.1	<0.1	<0.1			101.0		
61	34.9	37.5	3.6	46.6	17.9	64.5	62.1	3.4	<0.1	0.3	0.3	0.3	0.1	99.7	99.8	0.1
61	40.0			41.5	18.2	59.7			<0.1	0.2	0.2			99.9		
105	16.7	18.9	3.1	55.9	26.0	81.9	79.4	3.5	<0.1	1.0	1.0	1.0	0.1	99.6	99.3	0.5
105	21.1			46.4	30.5	76.9			<0.1	0.9	0.9			98.9		
															99.8	2.8

	Extractable			Non-extr.		
Day		Ave.	St.Dev.		Ave.	St. Dev.
0	33.7	39.7	8.4	1.3	1.3	0.1
0	45.6			1.2		
0.25	41.1	42.8	2.3	1.3	1.8	0.7
0.25	44.4			2.3		
1	36.9	42.8	8.3	2.1	2.3	0.2
1	48.7			2.4		
2	28.1	33.8	8.1	1.7	2.0	0.4
2	39.5			2.2		
7	65.0	69.0	5.7	6.6	6.4	0.3
7	73.0			6.2		
14	68.3	68.8	0.7	6.3	6.4	0.1
14	69.3			6.4		
30	60.5	64.1	5.1	8.5	7.3	1.8
30	67.7			6.0		
61	46.6	44.1	3.6	17.9	18.1	0.2
61	41.5			18.2		
105	55.9	51.2	6.7	26.0	28.3	3.2
105	46.4			30.5		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/river

Parent Table 18, p. 74

Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	54.4	55.4	1.4	42.9	42.7	0.3	97.3	98.10	1.13
0	56.4			42.5			98.9		
0.25	51.4	56.2	6.7	41.1	41.9	1.1	92.5	98.05	7.85
0.25	60.9			42.7			103.6		
1	48.8	49.6	1.1	51.3	49.8	2.2	100.1	99.35	1.06
1	50.4			48.2			98.6		
2	47.3	54.2	9.7	53.9	47.8	8.7	101.2	101.90	0.99
2	61			41.6			102.6		
7	9.7	9.5	0.4	84.5	86.5	2.8	94.2	95.90	2.40
7	9.2			88.4			97.6		
14	2	2.0	0.1	59.5	58.8	1.1	61.5	60.70	1.13
14	1.9			58			59.9		
30	nd			52.2	51.0	1.8	52.2	50.95	1.77
30	nd			49.7			49.7		
61	nd			24.3	29.7	7.6	24.3	29.65	7.57
61	nd			35			35		
105	nd			24.6	21.8	4.0	24.6	21.75	4.03
105	nd			18.9			18.9		

	Table 19, p. 75 M11 (RW1)			Table 23, p. 79 M11 (RS1)					
Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	nd			nd			nd		
0	nd			nd			nd		
0.25	nd			nd			nd		
0.25	nd			nd			nd		
1	nd			nd			nd		
1	nd			nd			nd		
2	nd			nd			nd		
2	nd			nd			nd		
7	0.7	0.55	0.21	nd			0.7	0.55	0.21
7	0.4			nd			0.4		
14	4.7	5.50	1.13	1.4	1.8	0.6	6.1	7.30	1.70
14	6.3			2.2			8.5		
30	5	5.30	0.42	6.5	6.8	0.4	11.5	12.05	0.78
30	5.6			7			12.6		
61	8.7	8.05	0.92	18.9	16.8	3.0	27.6	24.85	3.89
61	7.4			14.7			22.1		
105	9.9	8.85	1.48	12.4	13.6	1.6	22.3	22.40	0.14
105	7.8			14.7			22.5		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/river

	M8 (RW6)			M8 (RS2)					
Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	nd	nd		nd	nd		nd	nd	
0	nd			nd			nd		
0.25	nd	nd		nd	nd		nd	nd	
0.25	nd			nd			nd		
1	0.3	0.2	0.1	nd	nd		nd	nd	
1	0.1			nd			nd		
2	1.1	1.2	0.1	nd	nd		1.1	1.2	
2	1.2			nd			1.2		
7	5.8	4.2	2.3	nd	nd		5.8	4.2	
7	2.5			nd			2.5		
14	8	9.0	1.3	1	0.9	0.2	9	9.8	1.13
14	9.9			0.7			10.6		
30	15.3	16.6	1.8	1.5	1.5	0.0	16.8	18.1	1.77
30	17.8			1.5			19.3		
61	14.9	16.7	2.5	1.4	2.1	0.9	16.3	18.8	3.46
61	18.5			2.7			21.2		
105	16.7	15.6	1.6	2.7	2.7	0.1	19.4	18.2	1.70
105	14.4			2.6			17		

	M3 (RW7)			M3 (RS4)					
Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	nd	nd		nd	nd		nd	nd	
0	nd			nd			nd		
0.25	nd	nd		nd	nd		nd	nd	
0.25	nd			nd			nd		
1	nd	nd		nd	nd		nd	nd	
1	nd			nd			nd		
2	nd	nd		nd	nd		nd	nd	
2	nd			nd			nd		
7	nd	nd		nd	nd		nd	nd	
7	nd			nd			nd		
14	13.2	13.2	0.0	nd	nd		13.2	13.2	0.00
14	13.2			nd			13.2		
30	6.6	6.0	0.8	4.5	2.7	2.5	11.1	8.7	3.39
30	5.4			0.9			6.3		
61	3.7	3.9	0.2	2.2	3.3	1.5	5.9	7.1	1.70
61	4			4.3			8.3		
105	0.6	1.6	1.3	nd	<1.6		0.6	2.4	2.47
105	2.5			1.6			4.1		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/river

	RW4		
Day	Water	Ave	St.Dev
0	nd	nd	
0	nd		
0.25	nd	nd	
0.25	nd		
1	nd	nd	
1	nd		
2	nd	nd	
2	nd		
7	0.1	<0.1	
7	<0.1		
14	nd	nd	
14	nd		
30	nd	nd	
30	nd		
61	nd	nd	
61	nd		
105	nd	nd	
105	nd		

	RW5			RS5		
Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	0.0	0.2	0.2	0.0	0.0	0.0
1	0.3			0.0		
2	0.2	0.2	0.0	nd	<0.3	
2	0.2			0.3		
7	0.1	0.2	0.1	0.0	0.0	0.0
7	0.2			0.0		
14	nd	nd		nd	nd	
14	nd			nd		
30	nd	nd		2.8	4.2	1.9
30	nd			5.5		
61	nd	nd		6.6	<6.6	
61	nd			nd		
105	nd	nd		5.6	7.0	1.9
105	nd			8.3		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/river

	RW2			RS6		
Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	0.1	<0.1		nd	nd	
2	nd			nd		
7	nd	nd		nd	nd	
7	nd			nd		
14	nd	nd		nd	nd	
14	nd			nd		
30	nd	nd		nd	<0.5	
30	nd			0.5		
61	nd	nd		0.7	<0.7	
61	nd			nd		
105	nd	nd		1.3	1.2	0.1
105	nd			1.1		

	RW3			RS3		
Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	0.2	0.2	0.0	0.6	<0.6	
2	0.2			nd		
7	0.5	0.6	0.1	1.1	1.1	0.1
7	0.6			1		
14	0.3	0.5	0.2	1.8	1.6	0.3
14	0.6			1.4		
30	nd	nd		nd	nd	
30	nd			nd		
61	nd	nd		nd	nd	
61	nd			nd		
105	nd	nd		nd	nd	
105	nd					

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/river

	RW8			RW9		
Day	Water	Ave	St.Dev	Water	Ave	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	nd	nd		nd	nd	
2	nd			nd		
7	nd	nd		nd	nd	
7	nd			nd		
14	0.3	0.3	0.0	0.4	0.4	0.0
14	0.3			0.4		
30	0.1	<0.1		nd	nd	
30	nd			nd		
61	0.2	<0.2		0.3	<0.3	
61	nd			nd		
105	0.0	0.1	0.1	0.2	0.3	0.1
105	0.2			0.3		

	RW10			RW11		
Day	Water	Ave	St.Dev	Water	Ave	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	nd	nd		nd	nd	
2	nd			nd		
7	nd	nd		nd	nd	
7	nd			nd		
14	nd	nd		nd	nd	
14	nd			nd		
30	0.1	<0.1		nd	nd	
30	nd			nd		
61	0.3	<0.3		0.3	<0.3	
61	nd			nd		
105	nd	nd		nd	nd	
105	nd			nd		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/pond

Parent Table 27, p. 83 Table 32, p. 88

Day	Water	Ave	St.Dev	Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	64.2	59.5	6.7	33.7	39.7	8.4	97.9	99.10	1.70
0	54.7			45.6			100.3		
0.25	50.3	51.6	1.8	39.2	41.8	3.7	89.5	93.40	5.52
0.25	52.9			44.4			97.3		
1	53.9	51.6	3.3	36.9	42.7	8.2	90.8	94.25	4.88
1	49.2			48.5			97.7		
2	69.5	64.8	6.6	28	33.7	8.0	97.5	98.45	1.34
2	60.1			39.3			99.4		
7	15.3	14.6	1.0	62.7	67.2	6.3	78	81.75	5.30
7	13.9			71.6			85.5		
14	3.4	3.1	0.4	62.5	63.0	0.6	65.9	66.05	0.21
14	2.8			63.4			66.2		
30	0.2	0.1	0.1	26.1	37.7	16.4	26.3	37.80	16.26
30	0.0			49.3			49.3		
61	nd	nd		13.1	11.9	1.8	13.1	11.85	1.77
61	nd			10.6			10.6		
105	nd	nd		13.3	15.8	3.5	13.3	15.80	3.54
105	nd			18.3			18.3		

Table 28, p. 84

Day	M11 (PW1) Water	Ave	St.Dev	M11 (PS1) Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	nd	nd		nd	nd		nd	nd	
0	nd			nd			nd		
0.25	nd	nd		nd	nd		nd	nd	
0.25	nd			nd			nd		
1	nd	nd		nd	nd		nd	nd	
1	nd			nd			nd		
2	nd	nd		nd	nd		nd	nd	
2	nd			nd			nd		
7	0.3	0.45	0.21	nd	nd		0.3	0.45	0.21
7	0.6			nd			0.6		
14	1.8	1.90	0.14	0.9	1.0	0.1	2.7	2.85	0.21
14	2.0			1.0			3		
30	4.0	3.70	0.42	6.4	6.2	0.4	10.4	9.85	0.78
30	3.4			5.9			9.3		
61	5.8	6.35	0.78	21.6	18.6	4.3	27.4	24.90	3.54
61	6.9			15.5			22.4		
105	5.6	6.05	0.64	27.5	24.4	4.5	33.1	30.40	3.82
105	6.5			21.2			27.7		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/pond

Day	PW2 Water	Ave	St.Dev	PS2 Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	nd	nd		nd	nd	
2	nd			nd		
7	0.2	0.3	0.1	nd	nd	
7	0.3			nd		
14	0.0	0.1	0.1	nd	nd	
14	0.2			nd		
30	0.3	0.2	0.2	0.4	0.2	0.3
30	0.0			0.0		
61	nd	nd		nd	nd	
61	nd			nd		
105	nd	nd		0.3	0.3	0.0
105	nd			0.3		

Day	M8 (PW3) Water	Ave	St.Dev	M8 (PS3) Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	nd	nd		nd	nd		nd		
0	nd			nd			nd		
0.25	nd	nd		nd	nd		nd		
0.25	nd			nd			nd		
1	nd	nd		nd	nd		nd		
1	nd			nd			nd		
2	nd	nd		nd	nd		nd		
2	nd			nd			nd		
7	nd	<0.4		nd	nd		nd	<0.4	
7	0.4			nd			0.4		
14	nd	nd		0.5	0.4	0.1	0.5	0.40	0.14
14	nd			0.3			0.3		
30	10.8	8.9	2.7	2.8	2.6	0.4	13.6	11.45	3.04
30	7.0			2.3			9.3		
61	25.9	27.8	2.6	4.8	<4.8		30.7	30.15	0.78
61	29.6			nd			29.6		
105	10.7	12.4	2.4	4.1	3.8	0.5	14.8	16.15	1.91
105	14.1			3.4			17.5		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/pond

Day	M3 (PW5) Water	Ave	St.Dev	M3 (PS4) Soil	Ave.	St.Dev	Entire	Ave.	St.Dev.
0	nd	nd		nd	nd		nd		
0	nd			nd			nd		
0.25	nd	nd		nd	nd		nd		
0.25	nd			nd			nd		
1	0.5	0.5	0.1	nd	nd		0.5	0.5	0.1
1	0.4			nd			0.4		
2	1.1	1.1	0.1	0.2	0.2	0.0	1.3	1.3	0.1
2	1.0			0.2			1.2		
7	13.0	11.3	2.4	2.3	1.9	0.6	15.3	13.2	3.0
7	9.6			1.4			11		
14	21.3	20.8	0.8	4.4	4.5	0.1	25.7	25.3	0.6
14	20.2			4.6			24.8		
30	12.3	14.6	3.3	8.0	9.1	1.6	20.3	23.7	4.8
30	16.9			10.2			27.1		
61	0.5	0.6	0.1	2.3	5.4	4.3	2.8	5.9	4.4
61	0.6			8.4			9		
105	0.1	0.3	0.3	0.0	0.3	0.4	0.1	0.6	0.6
105	0.5			0.5			1		

Day	PW4 Water	Ave	St.Dev	PS5 Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	nd	nd		nd	nd	
2	nd			nd		
7	nd	nd		nd	nd	
7	nd			nd		
14	0.5	0.5	0.0	nd	nd	
14	0.5			nd		
30	nd	nd		nd	nd	
30	nd			nd		
61	0.7	0.7	0.1	nd	<4.4	
61	0.6			4.4		
105	0.3	<0.3		3.2	2.2	1.4
105	nd			1.2		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/pond

Day	PW6 Water	Ave	St.Dev	PS6 Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		nd	nd	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	nd	nd		nd	nd	
2	nd			nd		
7	nd	nd		nd	nd	
7	nd			nd		
14	nd	nd		nd	nd	
14	nd			nd		
30	2.8	1.4	2.0	16.5	<16.5	
30	0.0			nd		
61	0.9	1.4	0.7	3.7	2.6	1.6
61	1.9			1.5		
105	nd	nd		6.2	3.5	3.8
105	nd			0.8		

Day	PW7 Water	Ave	St.Dev	PS7 Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		1.4	<1.4	
0.25	nd			nd		
1	nd	nd		nd	<0.1	
1	nd			0.1		
2	nd	nd		nd	nd	
2	nd			nd		
7	nd	nd		nd	nd	
7	nd			nd		
14	nd	nd		nd	nd	
14	nd			nd		
30	nd	nd		nd	nd	
30	nd			nd		
61	0.7	0.5	0.4	nd	nd	
61	0.2			nd		
105	nd	nd		0.4	0.2	
105	nd			0.0		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label/system: Pyrazole/pond

Day	PW8 Water	Ave	St.Dev	PS8 Soil	Ave.	St.Dev
0	nd	nd		nd	nd	
0	nd			nd		
0.25	nd	nd		0.5	<0.5	
0.25	nd			nd		
1	nd	nd		nd	nd	
1	nd			nd		
2	nd	nd		nd	nd	
2	nd			nd		
7	nd	nd		nd	nd	
7	nd			nd		
14	nd	nd		nd	nd	
14	nd			nd		
30	nd	nd		0.4	<0.4	
30	nd			nd		
61	0.3	0.3	0.1	1.1	1.1	0.0
61	0.2			1.1		
105	nd	nd		0.9	0.9	0.1
105	nd			0.8		

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label: Pyrazole

River
High Dose

Day	Water	Sediment extract	Soxhlet	Total ext	Non-ext	Total sed.	Volatile	CO2	Total Vol.
29	38.8	57.2	nd	57.2	6.3	63.5	<0.1	0.1	<0.1
61	39.7	48.2	2.8	51.0	9.1	60.1	<0.1	0.4	<0.4
105	37.5	43.3	4.4	47.7	13.1	60.8	<0.1	1.4	<1.4

Day	In water Parent	In soil parent	Entire	RW1 water M11	RS1 soil M11	Entire M11	RW6 water M8	RS2 soil M8	Entire M8
29	0.0	36.4	36.4	9.2	11.0	20.2	15.8	4.8	20.6
61	0.1	21.4	21.5	5.2	21.2	26.4	32.9	6.1	39.0
105	0.0	14.0	14.0	8.5	23.7	32.2	27.4	7.0	34.4

Pond
High Dose

Day	Water	Sediment extract	Soxhlet	Total ext	Non-ext	Total sed.	Volatile	CO2	Total Vol.
29	29.5	65.6	nd	65.6	5.8	71.4	nd	nd	nd
61	47	41.3	3.1	44.4	8.8	53.2	<0.1	0.2	<0.2
105	33.2	49.2	3.1	52.3	12.8	65.1	<0.1	0.7	<0.7

Day	In water Parent	In soil parent	Entire	RW1 water M11	RS1 soil M11	Entire M11	RW6 water M8	RS2 soil M8	Entire M8
29	nd	24.5	24.5	9.2	2.4	11.6	16.0	0.6	16.6
61	0.2	18.7	18.9	6.3	14.1	20.4	38.4	11.7	50.1
105	nd	8.5	8.5	3.8	13.2	17.0	28.2	8.9	37.1

Chemical Name: Fenpyroximate
MRID 45734202 & 47521406
Guideline: 162-4
Label: Pyrazole
River
Sterile

Day	Water	Sediment extract	Soxhlet	Total ext	Non-ext	Total sed.	Volatile	CO2	Total Vol.
2	55.3	46.4	nd	46.4	1.0	47.4	nd	nd	nd
61	13.4	85.3	nd	85.3	1.9	87.2	<0.01	<0.01	<0.01
105	11.0	89.8	2.4	92.2	0.7	92.9	<0.01	<0.1	<0.1

Day	In water Parent	In soil parent	Entire	RW1 water M11	RS1 soil M11	Entire M11	RW6 water M8	RS2 soil M8	Entire M8
2	55.3	46.4	101.7	nd	nd	nd	nd	nd	nd
61	5.7	80.6	86.3	4.1	4.8	8.9	0.8	nd	0.8
105	4.1	87.1	91.2	1.8	3.5	5.3	1.0	0.6	1.6

Pond
Sterile

Day	Water	Sediment extract	Soxhlet	Total ext	Non-ext	Total sed.	Volatile	CO2	Total Vol.
2	47.6	52.2	nd	52.2	<0.1	52.2	nd	nd	nd
61	14.6	83.2	nd	83.2	1.9	85.1	<0.1	<0.01	<0.1
105	14.2	82.3	1.7	84.0	1.3	85.3	<0.1	<0.1	<0.1

Day	In water Parent	In soil parent	Entire	RW1 water M11	RS1 soil M11	Entire M11	RW6 water M8	RS2 soil M8	Entire M8
2	47.6	52.2	99.8	nd	nd	nd	nd	nd	nd
61	1.5	72.5	74.0	4.2	8.2	12.4	6.5	1.0	7.5
105	0.8	69.5	70.3	2.3	7.8	10.1	8.3	1.9	10.2

Chemical: Fenpyroximate
PC: 129131
MRID: 47521406
Guideline: 835.4300

Amendment to aerobic aquatic metabolism of [pyrazole-3-^{14}C]fenpyroximate in two Switzerland water-sediment systems.

M3 in sterile systems.

	Sterile sandy loam sed.			Sterile silt loam sed.		
	Water	Sed.	Sys.	Water	Sed.	Sys.
Day	% AR	% AR	% AR	% AR	% AR	% AR
2						
61	0.1		0.1	1.4	0.9	2.3
105	0.4	0.6	1.0	2.9	3.0	5.9

Results from Table 22, p. 78; Table 26, p. 82; Table 31, p. 87; Table 35, p. 91 of the study amendment.
Blank cell = not detected.

M3 in non-sterile systems

	Sandy loam sediment (River) systems									Silt loam sediment (Pond) systems.								
	Water (RW7)			Sediment (RS4)			Total system			Water (PW5)			Sediment (PS4)			Total system		
Day	% AR	mean	s.d.	% AR	mean	s.d.	% AR	mean	s.d.	% AR	mean	s.d.	% AR	mean	s.d.	% AR	mean	s.d.
0																		
0.25																		
1										0.5						0.5		
										0.4	0.5	0.1				0.4	0.5	0.1
2										1.1			0.2			1.3		
										1.0	1.1	0.0	0.2	0.2	0.0	1.2	1.3	0.0
7										13.0			2.3			15.3		
										9.6	11.3	1.7	1.4	1.9	0.5	11.0	13.2	2.2
14	13.2						13.2			21.3			4.4			25.7		
	13.2	13.2	0.0				13.2	13.2	0.0	20.2	20.8	0.6	4.6	4.5	0.1	24.8	25.3	0.4
30	6.6			4.5			11.1			12.3			8.0			20.3		
	5.4	6.0	0.6	0.9	2.7	1.8	6.3	8.7	2.4	16.9	14.6	2.3	10.2	9.1	1.1	27.1	23.7	4
61	3.7			2.2			5.9			0.5			2.3			2.8		
	4.0	3.9	0.1	4.3	3.3	1.1	8.3	7.1	1.2	0.6	0.6	0.0	4.4	3.4	1.1	5.0	3.9	1
105	0.6						0.6			0.1			3.2			3.3		
	2.5	1.6	1.0	1.6	1.6	0.0	4.1	2.4	1.8	0.5	0.3	0.2	0.5	1.9	1.4	1.0	2.2	1.2

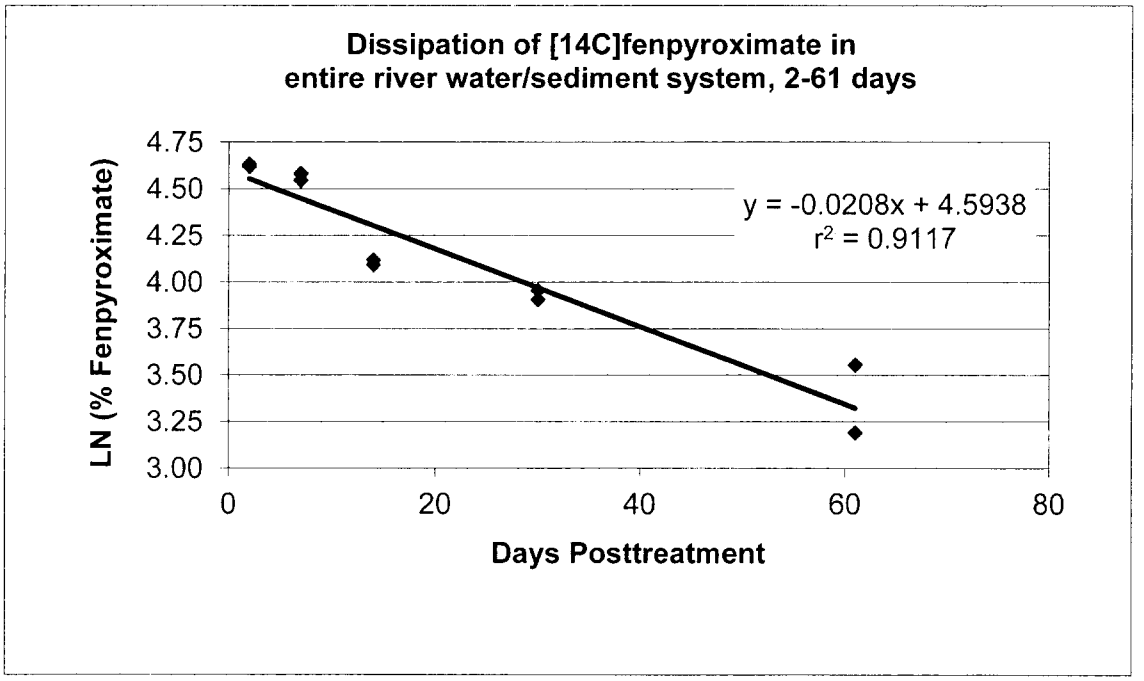
Results from Table 19, p. 75; Table 23, p. 79; Table 28, p. 84; Table 32, p. 88 of the study amendment.
Blank cell = not detected.

Chemical Name:	Fenpyroximate
MRID	45734202 & 47521406
Guideline:	162-4
System	River water/sediment

Half-life:	**33.32 days**

Entire System

Day	Fenpyroximate (% of applied)	ln (% applied)
2	101.2	4.6171
2	102.6	4.6308
7	94.2	4.5454
7	97.6	4.5809
14	61.5	4.1190
14	59.9	4.0927
30	52.2	3.9551
30	49.7	3.9060
61	24.3	3.1905
61	35.0	3.5553

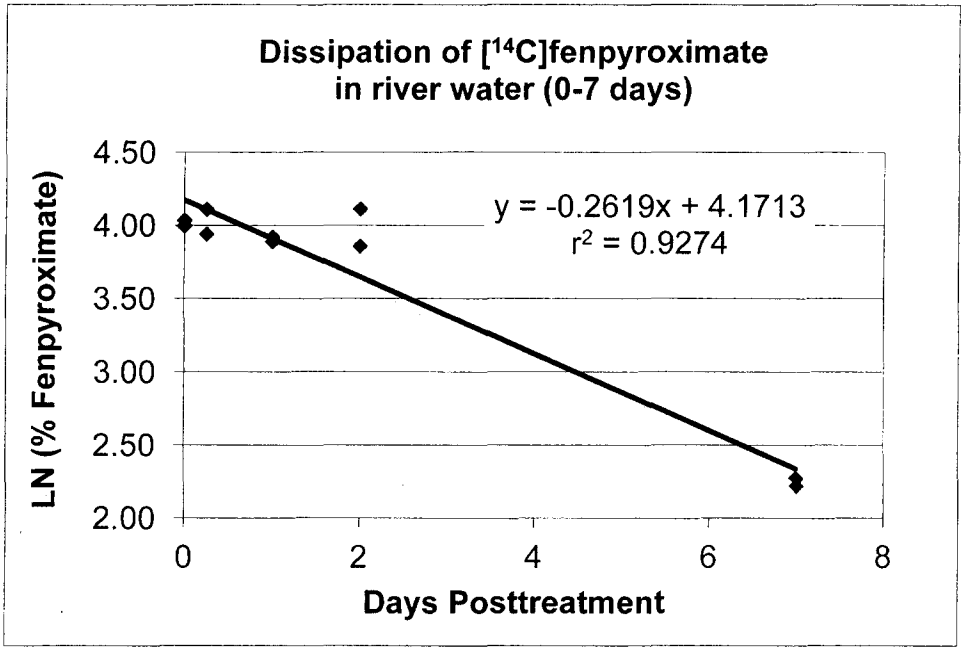


Chemical Name:	Fenpyroximate
MRID	45734202 & 47521406
Guideline:	162-4
System:	River water/sediment

Half-life:	**2.65 days**

Water

Day	Fenpyroximate (% of applied)	ln (% applied)
0	54.4	3.9964
0	56.4	4.0325
0.25	51.4	3.9396
0.25	60.9	4.1092
1	48.8	3.8877
1	50.4	3.9200
2	47.3	3.8565
2	61.0	4.1109
7	9.7	2.2721
7	9.2	2.2192

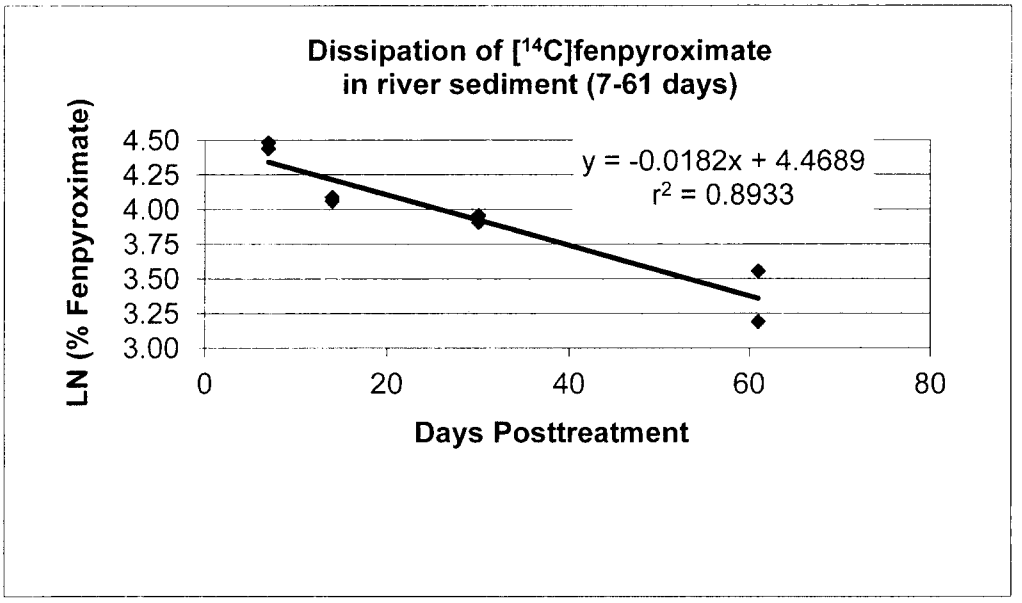


Chemical Name:	Fenpyroximate
MRID	45734202 & 47521406
Guideline:	162-4
System:	River water/sediment

Half-life:	**38.09 days**

Sediment

Day	Fenpyroximate (% of applied)	ln (% applied)
7	84.5	4.4368
7	88.4	4.4819
14	59.5	4.0860
14	58.0	4.0604
30	52.2	3.9551
30	49.7	3.9060
61	24.3	3.1905
61	35.0	3.5553

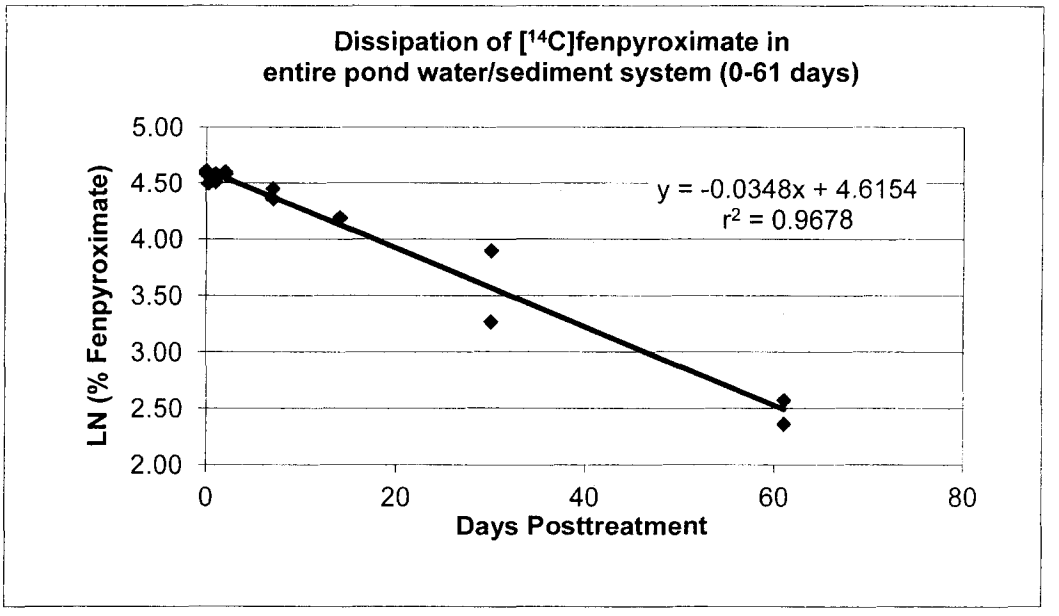


Chemical Name:	Fenpyroximate
MRID	45734202 & 47521406
Guideline:	162-4
System	Pond water/sediment

Half-life:	**19.92 days**

Entire System

Day	Fenpyroximate (% of applied)	ln (% applied)
0	97.9	4.5839
0	100.3	4.6082
0.25	89.5	4.4942
0.25	97.3	4.5778
1	90.8	4.5087
1	97.7	4.5819
2	97.5	4.5799
2	99.4	4.5992
7	78.0	4.3567
7	85.5	4.4485
14	65.9	4.1881
14	66.2	4.1927
30	26.3	3.2696
30	49.3	3.8979
61	13.1	2.5726
61	10.6	2.3609

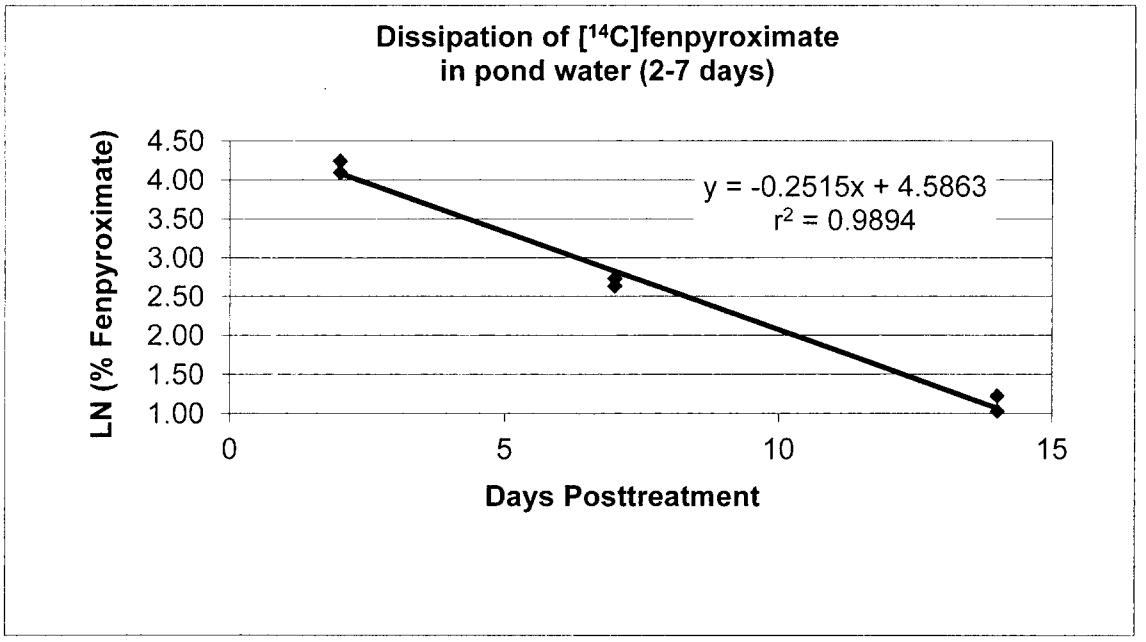


Chemical Name:	Fenpyroximate
MRID	45734202 & 47521406
Guideline:	162-4
System:	Pond water/sediment

Half-life:	**2.76 days**

Water

Day	Fenpyroximate (% of applied)	ln (% applied)
2	69.5	4.2413
2	60.1	4.0960
7	15.3	2.7279
7	13.9	2.6319
14	3.4	1.2238
14	2.8	1.0296



Chemical Name:	Fenpyroximate
MRID	45734202 & 47521406
Guideline:	162-4
System:	Pond water/sediment

Half-life:	**20.75 days**

Sediment

Day	Fenpyroximate (% of applied)	ln (% applied)
7	62.7	4.1384
7	71.6	4.2711
14	62.5	4.1352
14	63.4	4.1495
30	26.1	3.2619
30	49.3	3.8979
61	13.1	2.5726
61	10.6	2.3609